

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 8 (cancelled)

Claim 9 (new): A method for measuring the quantity of chemical species contained in a high-temperature gas and especially the quantity of CO and/or CO₂ contained in a gas output by a metal treatment furnace, and especially an electric arc furnace (EAF) or a basic oxygen furnace (BOF) or converter, characterized in that a portion of the gas to be analyzed is taken off, its temperature is lowered down to less than 300°C, preferably down to a temperature of 200°C or below, so as to obtain a gas with a temperature between 300°C, preferably 200°C, and room temperature, and then at least the quantity of CO and/or CO₂ present in this gas is measured by means of the coherent light signal that is emitted by a diode laser through said gas and recovered upon emerging from said gas.

Claim 10 (new): The method of claim 9, characterized in that the concentration of other species in the high-temperature gas is also measured using a diode laser, and especially the concentration of at least one of the species chosen from CO and/or O₂ and/or H₂O and/or CO₂.

Claim 11 (new): The method of claim 9, characterized in that the temperature of the high-temperature gas is also measured using a diode laser.

Claim 12 (new): The method of claim 9, characterized in that a tunable diode laser (TDL) is used whose wavelength is continually adjustable over a wavelength range.

Claim 13 (new): The method of claim 9, characterized in that the coherent light source of the diode laser emits in a near-infrared wavelength range.

Claim 14 (new): The method of claim 13, characterized in that the wavelength range includes the 1581 nanometer wavelength.

Claim 15 (new): The method of claim 9, in which the gas to be analyzed is taken off by means of a probe of axial symmetry, characterized in that the probe includes a part that can move about the axis of symmetry of the probe and can remove the impurities

that have built up on the internal wall of said probe by relative rotation of the part and/or of the probe about the axis.

Claim 16 (new): The method as claimed in claim 15, in which additional pneumatic unclogging means using compressed air are provided.